

#22  
7/17/03  
D. Bone

S/N 09/380,447

PATENTIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	SIDHU ET AL.	Examiner:	MY-CHAU T. TRAN
Serial No.:	09/380,447	Group Art Unit:	1639
Filed:	SEPTEMBER 1, 1999	Docket No.:	11669.141USWO
Confirmation No.:	2633	Customer No.:	23552
Title:	TRANSFORMATION EFFICIENCY IN PHAGE DISPLAY THROUGH MODIFICATION OF A COAT PROTEIN		

CERTIFICATE UNDER 37 CFR 1.6(d):

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on July 17, 2003.

By:   
 Name: Shelly A. Boerboom

RESPONSE TO SUPPLEMENTAL RESTRICTION REQUIREMENT

Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

Dear Sir:

Applicants have received and reviewed a supplemental Restriction Requirement. In the supplemental Restriction Requirement, the Examiner required a further election of a single species of virus, and election of a specific amino acid substitution at each position. The Examiner further contends that election of an antibody or fragment of antibody is not a single species election for the species of the heterologous protein. Applicants respectfully traverse the restriction requirement and this further election of species requirement.

Applicants traverse the restriction requirement. Applicants' submit that this patent application is a national stage application of a PCT and, therefore, is governed by the PCT Unity of Invention Standard and rules of the PCT. Applicants submit the Examiner must follow Rule 13.1 and Rule 13.2 in determining Unity of Invention for a national stage application in accord with Caterpillar Tractor Co. v. Commissioner of Patent and Trademarks, 231 USPQ 590 (E.D.Va. 1986) and MPEP § 1850. Applicants submit that the Examiner has failed to do so and has ignored the Unity of Invention established in the International Preliminary Examination report.

Secondly, Applicants traverse the additional election of species requirement. Applicants submit that the Examiner did not require election of a single species of virus, election of a single amino acid substitution at each position and election of single species of heterologous peptide. The previous restriction requirement indicated an election of species for a single type of virus (phage), a single amino residue and its position; and a single type of heterologous polypeptide. Applicants submit they have elected the species as required by the Examiner. They have elected gp VIII major coat protein of a phage; identified a single amino acid residue and its position - position 17 serine substituted with isoleucine in p VIII, and identified a type of heterologous protein- an antibody or fragment thereof. Applicants submit this election of species was in compliance with the Examiner's election of species requirement and that it would not be unduly burdensome for the Examiner to search based on the previously elected species.

Although Applicants do not concede the propriety of the Restriction Requirement or election of species, Applicants hereby elect additional species as requested by the Examiner. Applicants elect M13 filamentous phage. Applicants would like to switch the election of the heterologous protein from an antibody or fragment thereof, to human growth hormone. For each amino acid position, Applicants elect the following amino acid substitutions:

at position 1: D  
at position 2: K  
at position 3: S  
at position 4: E  
at position 5: K  
at position 6: F  
at position 7: S  
at position 8: R  
at position 9: D  
at position 11: Y  
at position 12: E  
at position 13: A  
at position 14: L  
at position 15: E  
at position 16: D  
at position 17: I  
at position 18: I  
at position 19: T  
at position 20: N  
at position 21: L  
at position 22: F  
at position 23: F

at position 24: L  
at position 25: L  
at position 26: G  
at position 27: T  
at position 28: V  
at position 29: Y  
at position 30: V

**SUMMARY**

Applicants submit that the claims are in condition for allowance and notification to that effect is earnestly solicited. The Examiner is invited to contact Applicants' representative if prosecution may be assisted thereby.

Respectfully submitted,

MERCHANT & GOULD P.C.  
P.O. Box 2903  
Minneapolis, Minnesota 55402-0903  
(612) 332-5300

Date: July 17, 2003

*Katherine M. Kowalchyk*

Katherine M. Kowalchyk

Reg. No. 36,848

KMK:sab



**Merchant & Gould**  
An Intellectual Property Law Firm

3200 IDS Center  
80 South Eighth Street  
Minneapolis, Minnesota  
55402-2215 USA  
TEL 612.332.5300  
FAX 612.332.9081  
[www.merchant-gould.com](http://www.merchant-gould.com)

**FAX RECEIVED**

JUL 18 2003

A Professional Corporation  
**GROUP 1600**

**Fax Transmission | July 17, 2003**

TO: Commissioner for Patents  
Attn: Examiner My-Chau T. Tran  
Patent Examining Corps  
Facsimile Center  
Washington, D.C. 20231

FROM: Katherine M. Kowalchyk  
OUR REF: 11669.141USWO  
TELEPHONE: 612.371.5311

Total pages, including cover letter: 4

**PTO FAX NUMBER 1-703.872.9306**

If you do NOT receive all of the pages, please telephone us at 612.371.5204, or fax us at 612.332.9081.

Title of Document Transmitted:

**SUPPLEMENTAL RESPONSE TO  
RESTRICTION REQUIREMENT**

Applicant: SDHU ET AL.  
Serial No.: 09/380,447  
Filed: SEPTEMBER 1, 1999  
Group Art Unit: 1639  
Our Ref. No.: 11669.141USWO

Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate.

By: Katherine M. Kowalchyk  
Name: Katherine M. Kowalchyk  
Reg. No.: 36,848

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on the date shown below.

July 17, 2003

Amy A. Bourbon  
Signature

July 17, 2003  
Date